FAST Science

Story and Photos by SPC Chris Porter

WHEN Michael Golden deploys with the Italy-based 173rd Airborne Brigade to places like Grafenwöhr Training Area in Germany, he doesn't mind hearing soldiers complain. That's because the science advisor for the Army's Southern European Task Force knows some of those complaints can blossom into ideas to help soldiers better perform their missions.

Golden's job is to address the technology issues soldiers have with their equipment.

"The Army today needs cutting-edge technology," he said. "The Army Material Command's Field Assistance in Science and Technology, or FAST, Activity has a slogan, 'Making technology work for the soldier.' That's the best way to describe what I do."

To help provide that technology to SETAF, and the Army, Golden takes soldiers' ideas and uses them to create new technologies, or improve existing equipment and systems.

One of the many projects Golden currently oversees for SETAF is the new pedestal mount for the Javelin fire-and-forget antitank missile system.

"We first got the Javelin missile system in 2000," he said. "We fired it for the first time at Graf last fall. Afterward, the brigade commander came to me and asked if there was a way to fire the missile while it was mounted atop a Humvee."

1LT Rich Thomas demonstrates the Soldier Intercom System his Vicenza-based platoon has been testing for the past year.

After returning to his Caserma Ederle office in Vicenza, Italy, Golden found that a mount for the system was already in development.

"So I called the developers and asked if SETAF could get some prototype mounts for evaluation," he said.

Tom Yost, a project engineer in the Javelin project office, came to Germany from the U.S. Army Aviation and Missile Command at Redstone Arsenal, Ala., to work with Golden and hear soldiers' comments first-hand. Yost plans to apply that input to future modifications and developments in the Javelin program.

Thanks to the extensive range facilities available at Grafenwöhr, Golden said, the technology being evaluated by 173rd soldiers gets put through its paces in an environment very similar to real-world conditions.

To get the kind of information needed to improve new equipment, Golden said: "We get the users to complete a survey, couple that with interviews and photos, and submit that as a formal report to the Army's FAST office."

The FAST office then determines whether to continue development or to conduct additional research.

In addition to the Javelin mount, 173rd soldiers are evaluating a lighter

Tom Yost, a Javelin missile system project engineer, listens as SPC Chris Dahl makes a few suggestions after seeing the prototype of the Javelin pedestal mount.

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tripod for the M-249 squad automatic weapon. Originally developed by the Marine Corps, the tripod is about half the weight of the original model.

The Night Hunter, a powerful infrared light device, is another product being evaluated. This cylindrical device, similar to a large standard flashlight, is able to send a strong beam of light over long distances. With a simple screw-on filter, it can emit infrared light for use with night-vision goggles when additional invisible light is needed to view an object or area.

Also under evaluation is a soldier intercom system, a helmet-mounted, personal communication device. Brigade soldiers have been testing the intercom for about a year, and have made several suggestions to improve it. One recommendation was to add a small strap to better secure the device to the helmet.

Another useful technology being evaluated is the Eagle Mount, which allows gunners to mount a second weapon atop a Humvee, next to the vehicle's primary weapon. As an example, an M-249 squad automatic weapon can be mounted next to a TOW antitank missile system, giving the gunner an additional firepower option.

SPC Cesar Medrano of the 508th ABCT holds the Night Hunter, a large infrared flashlight currently being tested by SETAF soldiers.

Golden says most of these projects began with a soldier's idea.

"When a problem or idea reaches me, I come back to my office and research whether the idea already exists," he said.

If he does find a pre-existing project, he asks the developers to send prototypes to SETAF for evaluation. If the idea is entirely new, Golden then asks the FAST office if the idea can be developed into a new system.

Such was the case with the HMMWV-Mounted Thermal Imaging System, which allows gunners to fire their vehicle-mounted weapons using a thermal-imaging system that operates at night or in low-light conditions — such as smoke or fog — that may obscure targeting.

"A while back, soldiers from the 173rd's Echo Company wanted a way to fire their .50-caliber weapons in the dark," Golden said. "FAST helped the U.S. Army Communications-Electronics Command develop a system that allows them to do that." The battalion had evaluated previous versions of the system, and an improved version is planned for delivery this fall.

When successes like that happen, it's soldiers who reap the most benefits, said SPC Chris Dahl, a TOW gunner with Co. E, 1st Bn., 508th Infantry.

"Most of us are very enthusiastic about some of these new ideas — especially ones like the lighter SAW mount — that make our job easier," he said.

Golden agreed. "Everywhere I go, the brigade soldiers are really enthusiastic; they have hundreds of ideas on how to improve the equipment," he said. That's what makes my job great: talking to the soldiers and listening to their ideas." □

SETAF Science Adviser Michael Golden inspects the Eagle Mount with SPC Chris Dahl. The mount lets gunners add a second weapon to their primary weapon system.

"Making Technology Work for the Soldier"